

REMARKS

Pending Claims

Independent claims 33 and 41 are pending. Claims 29-32, 34-40 and 42-48 have been canceled without prejudice or disclaimer. Claims 1-28 were canceled by prior amendments. No new claims have been added.

35 U.S.C. §101

Claims 29-48 were rejected under 35 USC 101 because the invention was alleged to be directed to non-statutory subject matter. Claims 29-32, 34-40 and 42-48 have been canceled, and the rejection of these claims is now moot.

Claims 33 and 41 achieve a useful, tangible and concrete result for accomplishing a practical application by generating a replica database which is accessed in place of the plurality of master databases when executing a job requiring accessing of the plurality of master databases, whereby time required for executing the job is minimized. This limitation has been added to claims 33 and 41 and finds support at, e.g., page 24, lines 14, through page 25, line 8. Accordingly, the claimed invention clearly has real-world value in that a single database is generated and is accessed thereby reducing execution time for jobs that would otherwise require accessing multiple master databases. Applicant respectfully submits that generating a replica database that is accessed in place of the plurality of master databases when executing a job is a useful, tangible and concrete result having a practical real-

world application and value. Claims 33 and 41 have been amended by adding the above limitation to address the rejections of these claims under 35 U.S.C. §101. Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejections under 35 U.S.C. §101. Further, even if the rejections are maintained, Applicant respectfully requests entry of the amendments as they put the claims into better condition for appeal.

35 U.S.C. §112

Claims 29-48 stand rejected under 35 U.S.C. §112, second paragraph as being indefinite. Claims 29-32, 34-40 and 42-48 have been canceled, and the rejection of these claims is now moot.

With regard to claim 33, the Office Action (page 14, item 14) states that the *steps do not replicate database from "master databases", but merely "replications of data" formed*. In response, Applicant believes the claim language has been misinterpreted. Applicant's claim is directed to generating and managing a "replica database", which is derived from a joining of data of two or more master databases. This is accomplished by replicating some of the data of the master databases to the replica database. Applicant has deleted the word "replication" from the preamble to the claims for clarification.

Also with regard to claim 33, the Office Action states that the steps of "in response to reception of a data operation...", "determining...", "when timing

conditions...", and "referring to..." are indefinite as lacking concrete active limitations as to how the steps are accomplished. In response, Applicant notes that "timing conditions" are defined at lines 6-8 of claim 33, i.e., the timing conditions set timings at which replications of data are performed to the replica database from the master databases. Timing conditions are similarly defined in claim 41. Thus, Applicants respectfully disagree that the timing conditions are not defined. Further, in view of this, the step of determining whether a processing result of the data operation request meets the timing conditions clearly requires a determination of whether it is time to perform a replication of data to from the master databases to the replica database. Thus, the steps of "when timing conditions are met..." should also be self-explanatory. With respect to the step of "referring to said stored operation information to acquire the operated record subject to the data operation...", Applicant notes that "said stored operation information" should read "said stored identification information of the operated record" for proper antecedence. Accordingly, Applicant has amended claims 33 and 41 to correct this error.

Further with respect to the rejection of claims 41-48 (page 16, item 22, of the Office Action), Applicant does not understand the reference to the claims not having "instructions". Applicant respectfully requests that the Examiner clarify this point. Additionally, the Office Action states that "computer readable medium" is not defined in the specification. In response, Applicant has amended claim 41 to a process implementing a program. In view of the foregoing explanation and the amendments

to claims 33 and 41, Applicant respectfully requests that the rejections of these claims be reconsidered and withdrawn. Further, even if the rejections are maintained, Applicant respectfully requests entry of the amendments as they put the claims into better condition for appeal.

35 U.S.C. §102

Claims 29-48 stand rejected under 35 U.S.C. §102(e) as being anticipated by Souder et al., U.S. Patent No. 6532479 (hereafter "Souder"). Applicant respectfully traverses these rejections, and requests reconsideration and withdrawal of the rejections for the following reasons.

According to Applicant's invention, when an accepted data operation request satisfies a timing condition, the records stored in one master database and subjected to the data operation are joined with another of the plurality of master databases based on a stored joining key corresponding to the timing condition to generate a new record in the replica database. As a result, a replica database can be generated from a plurality of master databases by storing joining keys, master database names, replica database names and timing conditions (see, for example, replication control table 119 in Figs. 4 and 5).

Souder, on the other hand, teaches that snapshots of single tables have a plurality of copy destinations. For example, portions of customer master table 1212 and order master table 1214 are sent from master site 1200 to client sites 1220 (see,

e.g., FIG. 12 and col. 2, line 31, through col. 3, line 30). These portions of the master tables are stored as a customer snapshot 1232 and an order snapshot 1234 at one client and a customer snapshot 1252 and an order snapshot 1254 at another client. The snapshots at one client contain a different subset of the master tables than the snapshots at the other client.

This is entirely different from Applicant's invention, in which plural master databases are combined into a single joined database. Applicant's claim 33 includes a "replica database generated from said plurality of master databases by join operations". Under claim 33, a joining processing is performed with respect to the operated record subject to the data operation and said second master database to be joined. A replica database record generated by the joining processing is reflected to said replica database to implement to said replica database the data operation based on said data operation request. Thus, under Applicant's invention, when a record in one master database is subjected to a data operation (such as inserting, deleting, changing the record), then the operated record is subject to a joining processing with the second master database to produce a record for the replica database. Souder fails to teach or suggest any joining of databases.

Furthermore, according to Applicant's invention, the joining processing is performed using a joining key. The replica database is "generated from said plurality of master databases by join operations based on predetermined joining keys". A

joining key can correspond to a timing condition that sets a timing at which a replication of data is performed to the replica database from the master databases.

Souder teaches the each snapshot is identified by a key comprising the owner of the snapshot, the name of the snapshot, and the site identifier of the snapshot. However, Souder fails to teach or suggest a joining operation between snapshots. Thus, the keys taught by Souder serve an entirely different purpose than Applicant's joining keys, namely, Souder's keys only serve to identify individual snapshots, and are not used in joining operations. Thus, Souder also fails to teach or suggest this aspect of Applicant's claims.

In view of the foregoing, Applicant respectfully submits that independent claims 33 and 41 are allowable over Souder and the other art of record, whether taken singly, or in combination.

Conclusion

In view of the foregoing, Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Respectfully submitted,



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